

Amendments in the Specification

Page 1, please replace the paragraph spanning lines 11-16 with the following rewritten paragraph:

Reference may be made to M .H. Vyas et al. (Indian Patent No. 315/Del/95) wherein a method has been described for the preparation of sodium chloride containing low calcium impurity (Ca 0.16%) from sea brine using activated starch solution. Moreover the starch solution is heated prior to addition in sea brine solution. The limitation of this method is that the method is applicable to sea brine and not to subsoil brine. Besides, heating starch solution ~~imbibes~~ requires energy (power) which make the process uneconomical and unfeasible.

Page 1, please replace the paragraph spanning lines 24-29 with the following rewritten paragraph:

D.W.Kaufman in his book "Sodium chloride", Reinhold Publication Co., New York (1960), describes the use of (i) precipitants like calcium hydroxide and sodium carbonate to precipitate magnesium and calcium, and (ii) flocculent like poly-acrylamide to enhance the settling rate of the precipitates in the treatment of brine. The drawback of this process is that, the brine requires a prior chemical treatment to reduce the calcium and magnesium content. Moreover, the process also ~~imbibes~~ raises the problem of sludge disposal.

Page 3, please replace the paragraph spanning lines 16-20 with the following rewritten paragraph:

D.Bayer, EZ709,728-C2 (R.Scharfer) (1983) and K. Maycock et al., SCI Chlorine Symposium, London (June, 1997) has described the calcium sulphate removal and K.Haycock et al., has removed calcium using ion exchange process or by membrane nanofiltration. The drawback of the process is it requires a huge plant ~~having~~ increasing investment & and power.

Page 4, please delete the paragraph spanning line 27 through page 5, line 2:

~~In this method, the simple inventive steps adopted are (i) selecting specific type of cyanobacterial strains which has the affinity for calcium ions, (ii) the cyanobacteria after selection is used in very small amount, (iii) the cyanobacteria are effective in reducing calcium ions in brine solution with a very high salinity, (iv) the reduction of calcium ions by cyanobacteria is carried out at ambient temperature, (v) the cyanobacteria is self sustaining and the same can be reused for further removal of calcium from fresh brine, (vi) the process does not require any additional unit operation for separating adsorbed calcium ions.~~

Page 5, please replace the paragraph spanning lines 16-18 with the following rewritten paragraph:

To meet the above objects, the applicants developed a self-sustaining and cost effective process for the removal of calcium ions from the brine by using marine cyanobacteria at ambient temperature, which comprises the class of *cyanophyceae* *cyanophyceae* and family *Oscillatoriaceae*.

Page 5, please insert the following paragraph between lines 18 and 19:

In this method, the simple inventive steps adopted are (i) selecting specific type of cyanobacterial strains which has the affinity for calcium ions, (ii) the cyanobacteria after selection is used in very small amount, (iii) the cyanobacteria are effective in reducing calcium ions in brine solution with a very high salinity, (iv) the reduction of calcium ions by cyanobacteria is carried out at ambient temperature, (v) the cyanobacteria is self sustaining and the same can be reused for further removal of calcium from fresh brine, (vi) the process does not require any additional unit operation for separating adsorbed calcium ions.

Page 5, please replace the paragraph spanning line 20 through page 6, line 4, with the following rewritten paragraph:

Accordingly, the present invention provides an improved process for the removal of calcium from brine by marine cyanobacteria, which comprises of (i) culturing the marine cyanobacteria under known condition for a period of 42-48 hours to obtain young culture; (ii) inoculating the marine cyanobacteria so obtained to raw brine of 10 to 25.5oBe at ambient temperature; (iii) aging the mixture for a period of 3 to 96 hours in static condition at ambient temperature; (iv) maintaining the concentration of cyanobacteria in the range of 2 to 10 grams per liter (fresh weight) in sea brine/subsoil brine; (v) filtering the mixture to separate cyanobacteria and separately collecting the treated brine solution; (vi) adding the cyanobacteria so obtained to brine of lower density where it oozes the calcium to its maximum; (vii) re-inoculating the mixture so obtained as in (vi) at controlled rate to the fresh brine of higher density in order to further uptake/adsorb calcium; and (viii) the self sustaining (autotrophic) property of cyanobacteria with euryhaline nature makes these cyanobacteria acclimatize and increase in biomass in severe brine condition without any external source of nutrients or energy.

Page 7, please replace the paragraph spanning lines 4-6 with the following rewritten paragraph:

In still another embodiment of the present invention, the cyanobacteriae were selected from a class of *cyanophyceae cyanophyceae* namely *Lyngbya*, *Oscillatoria*, *Sprulina*, *Anabaena* and *Synechocystis*, which has the affinity for calcium ions.

Page 13, please replace the previously inserted paragraph after the last line on page 13 with the following rewritten paragraph:

Lyngbya aesturarii *Lyngbya aesturarii* SM-1 was deposited with ATCC on August 19, 2002 under Patent Deposit Designation PTA-4602, and ~~Consortium~~ *Consortium* of *Lyngbya* sp., *Oscillatoria* sp., *Anabaena* sp., *Spirulina* sp., and *Synechocystis* sp. was deposited with ATCC on August 19, 2002 under Patent Deposit Designation PTA-4603.